



Project No: S18349

15 February 2021

Property Corporation c/o
Thunderbirds Are Go Pty Ltd aft The Gardeners Trust
307 Lane Cove Road
MACQUARIE PARK, NSW 2113

Dear Sir

**EDEN GARDEN REDEVELOPMENT – MACQUARIE PARK
DEVELOPMENT APPLICATION – STRUCTURAL STATEMENT**

1 INTRODUCTION

BG&E Pty Ltd has been engaged by Thunderbirds Are Go Pty Ltd to review the Development Application architectural drawings for the proposed redevelopment at 307 Lane Cove Road, Macquarie Park 2113, and provide a structural statement that is to be submitted as part of the Development Application.

As part of this review, BG&E has been provided with DKO Architecture drawings and Realm DA Landscape DA report.

2 PROPOSED WORKS

The proposed commercial development will primarily comprise of the following structural areas:

1. A new 18 storey commercial tower located in the centre of the site, and a new multi storey car park (4 levels for carpark and roof top activity area) structure. Both new structures are built on top of a new common podium structure built over a new basement excavation for a new car park level, which will be integrated with the existing basement car park.
2. A new single level restaurant for outdoor and indoor dining spaces with a trafficable roof built on ground, located on the eastern side of the commercial tower.
3. The demolition of a section of the existing structure to enable the construction of a new and extended function centre space in the southwest of the site.
4. The alteration and additions of the existing garden centre located on the western side of the site. Which includes fit out amendments to the existing garden centre, café, amenities, food and beverage venue, and neighbourhood shops.

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5. A new rock climbing floor and vertical wall structure located on the eastern and southern elevation of the new multistorey car park.

The proposed structural works to each of these sites is described below.

2.1 New Commercial Tower and New Multi-Level Car Park Structure

Demolition

To achieve the proposed layout for the new structure, there will be significant demolition and excavation works that needs to be carried out over the existing site. The demolition extent currently resides within the existing garden centre, which comprises of a concrete pavement slab built on ground.

Excavation Support

Basement excavation extends well within the site boundary, which allows the construction of temporary batters to suit a retaining wall construction along the Eastern and Northern site boundaries. Temporary stability of existing structures within the site will be required once detailed excavation works are carried out.

New Structure

The proposed new building works will primarily comprise of a multiple floor concrete structure with a single level of basement car parking. The new concrete structure will be founded on suitable foundation as advised by the geotechnical report.

2.2 New Restaurant (East of the Site)

The new structure is constructed outside the proposed basement excavation works footprint and is built on ground.

New Structure

The proposed new building works will comprise of a concrete ground floor slab built on a suitable foundation with a trafficable roof composite slab built on structural steel spanning over a large column free space.

2.3 New and Extended Function Centre (South-West of the Existing Site)

Demolition

To achieve the desired function centre layout there will be significant demolition of the existing structure, which includes strengthening works to suit new structural conditions needs to be carried out. Parts of the existing structure that is to be retained will require remediation to facilitate the new function centre design intent.

New Structure

The proposed new structure will comprise of a new concrete structure with new foundations designed to suit the new structural design. The new structure will remain isolated from the existing structure.

2.4 Alterations and Additions to Existing Building (Western Area of the Existing Site)

Demolition

To achieve the desired function and feel to match the new structure, there will be modifications required to the existing interior spaces within the retail building. This will include alterations of non-load bearing partition walls and modifications to particular elements that will need structural advice.

New Structure

There is no new major structure being added here as we are dealing with an existing structure, and the works associated here are alterations and the very least will require some strengthening works to suit.

2.5 New Rock Climbing Structure on the Eastern and Southern Elevation of Multi Level Car Park Structure

New Structure

The proposed new structural flooring will consist of structural steel beams and columns that is connected to the multi level car park concrete structure. The climbing structure will consist of vertical columns and trusses to frame out the climbing wall and braced off the multi level car park concrete structure.

3.0 Code Compliance

The design of the proposed works will need to be in accordance with the structural provisions of the Building Code of Australia, Australian Standards AS 1170.1, AS 1170.2, AS1170.4, AS 3600, AS 3700 and AS4100 together with accepted engineering principles and practice.

Should you need anything further, or require any matters elaborated on, please contact the undersigned.

Yours sincerely,
For BG&E Pty Limited



Patrick Ceballos
Principal - Structures